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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Paper No. 13

Application Number: 09/738,319
Filing Date: December 18, 2000
Appellant(s): AIT-MOKHTAR ET AL.

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For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/15/04.

(1)   Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2)   Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly

affect or be directly affected by or have a bearing on the decision in the pending appeal

is contained in the brief.

(3)   Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4)   Status of Amendments After Final

No amendment after final has been filed.

(5)   Summary of Invention

The summary of invention contained in the brief is correct.

(6)   Issues

The appellant's statement of the issues in the brief is correct.

(7)   Grouping of Claims

Appellant's brief includes a statement that claims 1-8 and 10-20 do not stand or fall

together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8). Note that

the Appellants' incorrectly entered on line 16 "Claims 1-8, 9-18 and 20", which should

read –Claims 1-8, 10-18 and 20--.

(8)   Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9)   Prior Art of Record

6,006,221   Liddy et al.   12-1999

Collins, Michael "Discriminative Reranking for Natural Language Parsing" Proc. 17th

International Conf. on Machine Learning, pp. 175-182, July 2000.

(10)   Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

1.   Claims 1-8, 10-18, and 20 are rejected under 35 U.S.C. 102(e) as being

anticipated by Liddy et al. (US Patent 6,006,221), hereinafter referred to as Liddy.

Regarding claims 1 and 15, Liddy discloses a multilingual document retrieval

method. The steps taught by Liddy include the following: entering a query or document

for processing (Figs. 1 and 2 **70 110**, col. 2, lns. 42-65), which corresponds to "(a)

receiving the input strings"; subjecting each document to a sequence of processing

steps where one of the initial steps includes part of speech tagging (col. 2, lns. 55-60,

col. 7, lns. 21-46), which corresponds to "(b) linguistically analyzing the input strings to

generate a first representation of each of the input strings; each of the first

representations including linguistic information;" generating both conceptual and term-

based alternative representations of the documents and queries with relevant

information extracted from the documents and indexed (col. 6, lns. 15-20, Figs. 1 and 2,

col. 6, ln. 63 through col. 7, ln. 5), which corresponds to "(c) skeletising each of the first

representations to generate a corresponding second representation for each of the input

strings; said skeletising step replacing the linguistic information with abstract variables

in each of the second representations"; and storing the processed documents in a

database (col. 6, lns. 25-32, Fig. 1 **60**), which corresponds to "(d) storing the second

representation as normalized representations of the input strings."

Regarding claim 2, Liddy teaches everything claimed, as applied above (see

claim 1). In addition, Liddy teaches that multiple processing steps are performed

including part of speech tagging and proper noun categorization (Fig. 2, col. 7, lns. 21-46), which corresponds to "said step of linguistically analyzing comprises performing a plurality of operating functions."

Regarding claim 3, Liddy teaches everything claimed, as applied above (see claim 2). In addition, Liddy teaches that the processing steps include part of speech tagging, finding root forms, and concept tagging (col. 9, lns. 7-18, col. 10, lns. 26-40, col. 11, lns. 6-16, and lns. 34-53), which corresponds to "performing one of morphological analysis, syntactic analysis, and semantic analysis."

Regarding claim 4, Liddy teaches everything claimed, as applied above (see claim 3); in addition, Liddy teaches the finding of the root forms of the words (col. 11, lns. 6-8), which corresponds to "normalizing words according to their base forms."

Regarding claim 5, Liddy teaches everything claimed, as applied above (see claim 3); in addition, Liddy teaches the use of a part of speech tagger that identifies words as nouns, verbs, etc. (col. 9, lns. 11-18), which corresponds to "extracting a syntactic category for individual words."

Regarding claim 6, Liddy teaches everything claimed, as applied above (see claim 3); in addition, teaches the use of a preprocessor that performs discourse level tagging (col. 8, lns. 41-53) and processing modules that tag words and phrases (col. 10, lns. 53-63) in addition to part of speech tagging (col. 9, lns. 11-18), which corresponds to "extracting syntactic information representing string structure."

Regarding claim 7, Liddy teaches everything claimed, as applied above (see claim 3). In addition, Liddy teaches further processing to disambiguate concept group

assignments using a tree structure to represent portions of the text and indicate

relations between words (col. 16, ln. 42 through col. 18, ln. 30, in particular col. 17, lns.

22-39, Fig. 7), which corresponds to "extracting dependency relations between sub-

structures of a string."

Regarding claim 8, Liddy teaches everything claimed, as applied above (see

claim 3); in addition, Liddy teaches the use of concept groups (col. 9, ln. 7 through col.

12, ln. 10) and considers polysemous words having multiple concept-category tags

linking individual words to a single multilingual concept group (col. 11, lns. 35-55), which

corresponds to "providing semantic links for individual words."

Regarding claim 10, Liddy teaches everything claimed, as applied above (see

claim 1); in addition, Liddy teaches the use of conceptual and term-based

representations including the use of part of speech tagging (col. 6, lns. 15-20, col. 9, lns.

7-19), which corresponds to "the abstract variables are tags indicating the replaced

linguistic information."

Regarding claim 11, Liddy teaches everything claimed, as applied above (see

claim 1); in addition, Liddy teaches that the process documents are stored in a database

(col. 6, lns. 25-32, lns. 62-67, Fig. 1 **60**), which corresponds to "the normalized

representations are stored in a database."

Regarding claim 12, Liddy teaches everything claimed, as applied above (see

claim 11). In addition, Liddy teaches the following steps: accepting a query (Fig. 1 **70**,

col. 2, lns. 42-54), which corresponds to "receiving a query"; processing the query (col.

7, lns. 20-46, and also see rejection of claim 1, above), which corresponds to

"generating a normalized representation of said query by performing steps (b) and (c)";

matching the processed query to a processed document (Fig. 1 **55**, col. 7, lns. 20-46,

col. 18, §7.0, "Matching Documents to Queries"), which corresponds to "matching the

normalized representation of said query to the normalized representations stored in the

database"; and outputting the results of the query match (Fig. 1 **70**, col. 20, §8.2

"Graphical User Interface (GUI)"), which corresponds to "retrieving from said database

strings identified by said matching step."

Regarding claim 13, Liddy teaches everything claimed, as applied above (see

claim 1). In addition, Liddy teaches that the processing of queries or documents into

language independent representations where the languages supported include English,

French, German, etc. (col. 2, ln. 42 through col. 3, ln. 33), which corresponds to "said

steps (a) - (d) are performed to generate a translation memory comprising a plurality of

normalized representations of strings in a first language and a second language."

Regarding claim 14, Liddy teaches everything claimed, as applied above (see

claim 13). In addition, Liddy teaches the following steps: receiving a query and

determining the language of the query (Fig. 2, **110 120**), which corresponds to

"receiving an input string in the first language"; matching the conceptual representation

of the string to representations in the database documents that match and retrieving text

that matches (col. 2, ln. 65 through col. 3, ln. 33, col. 4, lns. 6-10), which corresponds to

"retrieving a similar string in said first language from said plurality of normalized

representations"; the system can also perform a gloss transliteration (col. 3, lns. 7-14) or

a machine translation (col. 22, lns. 30-38), which corresponds to "outputting said

translation information based on a string in said second language which corresponds to said retrieved string in said first language."

Regarding claim 16, Liddy teaches everything claimed, as applied above (see claim 15); in addition, the claim limitations correspond to some of those given in claim 12 and are rejected for the same reasons given above.

Regarding claim 17, Liddy teaches everything claimed, as applied above (see claim 16); in addition, the claim limitations correspond to some of those given in claim 12 and are rejected for the same reasons given above.

Regarding claim 18, Liddy teaches everything claimed, as applied above (see claim 16). In addition, Liddy teaches that the conceptualized (translated) documents are stored in a database (col. 2, lns. 43-65, Fig. 1 **60**) and that for documents that contain industry-specific terminology, associated multilingual objects may be stored (col. 22, lns. 49-54), which corresponds to "a translation memory for storing translations of the input strings."

Regarding claim 20, Liddy teaches everything claimed, as applied above (see claim 2). In addition, Liddy teaches that a sequence of processing modules are executed (to generate the language independent representation) (col. 7, ln. 21 through col. 8, ln. 40, Fig. 2) where these modules are inherently stored in the system, which corresponds to "storing further comprises storing the operating functions performed on the normalized representations."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liddy in

view of Collins ("Discriminative Reranking for Natural Language Parsing," *Proc. 17th*

International Conf. on Machine Learning, July 2000).

Regarding claim 19, Liddy teaches everything claimed, as applied above (see

claim 2), but Liddy does not specifically teach "performing machine learning for

selecting particular operating functions out of said plurality of operating functions and for

determining the processing order." However, the examiner contends that this concept

was well known in the art, as taught by Collins.

In the same field of endeavor, Collins teaches the machine learning technique of

discriminative reranking for natural language parsing where reranking techniques can

be applied to problems in natural language processing to improve the resulting

representations (§1 "Introduction").

Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to modify Liddy by specifically providing reranking

techniques, as taught by Collins, for the purpose of improving the resulting

representation.

(11)   Response to Argument

3.   Appellants arguments filed on 12/15/04 have been fully considered but are not

persuasive.

(B. Liddy does not anticipate Claims 1-8, 10-18 and 20)

4.   Appellants assert on page 14:

> The final rejection was repeated verbatim from its form in the previous
> (May 15, 2003) Office Action, despite the fact that in the "Response to
> Arguments" portion of the final rejection, a completely different part of
> Liddy (col. 15, line 63 through col. 16, line 10) was relied upon to allegedly
> disclose the feature of "skeletising each of the first representations to
> generate a corresponding second representation for each of the input
> strings; said skeletising step replacing the linguistic information with
> abstract variables in each of the second representations" than was relied
> upon in the final rejection as stated. The stated final rejection relies on
> column 6, lines 15-20, Figs. 1 and 2, column 6, line 63 through column 7,
> line 5 of Liddy to allegedly disclose this feature.

The reference to Liddy, col. 6 is from a section titled "Text Processing (Software)

Overview." By referring to the later section (col. 15) the Examiner attempted to clarify

the rejection, not confuse the issue.

5.   Appellants assert on page 15:

> While Liddy linguistically analyzes input strings to generate first
> representations (of those strings) which include linguistic information,
> Liddy does not perform skeletising of each of the first representations to
> generate a corresponding second representation for each of the input
> strings, the skeletising step replacing the linguistic information with
> abstract variables in each of the second representations, as recited in
> claim 1.

In Liddy, the "analogous processing" mentioned in column 6, lines 15-20 is said to be "to determine the requirements for document matching." The alternative representations of the documents and queries are said to be both conceptual and term based. See lines 19 and 20 of column 6 of Liddy. However, Liddy never performs further processing that obtains second representations obtained by replacing the linguistic information obtained by the initial processing with abstract variables. Nor does Liddy provide a system to do so.

Fig. 2 of Liddy shows a preferred method of operation, for example, in which a part of speech tagger 130 is disclosed as outputting a parts of speech tagged document and a proper noun identifier and a categorizer 140 is disclosed as identifying and tagging proper nouns. Modules 150-190 generate monolingual vector codes of the subject contents of both documents and queries. Module 150 tags each word with the codes of all multilingual concept groups to which various senses of the word/phrase in the document belong. Module 160 outputs a fully tagged text stream with a single multilingual concept group for each word in the input text. Module 170 outputs a tagged, native language text stream with unique, monolingual (English), hierarchical categories assigned to each substantive word. Module 180 outputs a text stream with disambiguated monolingual categories assigned to each substantive word. Module 190 produces a fixed-dimension vector representation of the concept-level context of the text.

None of this processing in Liddy replaces earlier performed linguistic analysis. Liddy performs additional processing of a query or of a document, but does not replace the earlier processing results. Not only does Liddy fail to disclose replacing linguistic information with other information, but Liddy also fails to disclose replacing linguistic information with abstract variables.

As argued in the Advisory action (of 9/22/03), Fig. 2 indicates a series of processing steps starting with the input of linguistic information and ending with the generation of the monolingual concept vector MCVG (these steps are perhaps more clearly seen in Fig. 5 with the resulting vector shown on the far right) where the final representation is used for searches. Thus, the examiner believes that Liddy does disclose the replacement of linguistic information with other information.

6.   Appellants assert on page 16:

> With respect to the additional reasons presented in the "Response to
> Arguments" section of the final Office Action, i.e., with respect to Fig. 5
> and column 15, line 63 to column 16, line 10 of Liddy, Appellants
> respectfully submit that the invention recited in claim 1 is not disclosed in
> those portions of Liddy.
>
> As discussed above, Liddy does not replace linguistic information with an
> "abstract variable" as recited in claim 1. The Microsoft Press Computer
> Dictionary, 1991 edition, defines "abstract data type" as "a data type that
> is defined in terms of the information it can contain and the operations that
> can be performed with it. An abstract data type is more generalized than
> one constrained by the properties of the object it contains . . ."

The Examiner notes that an "abstract **data type**" is not the same as an "abstract

variable," and agrees that an abstract data type is more generalized; however, the

limitation of claim 1 (item (c)) states "replacing the linguistic information with **abstract**

variables." The Examiner asserts that it is well known in the art that a variable is an

instance of a data type. In this case Liddy produces codes (abstract variables; Fig. 5, far

right) of categories or concepts (abstract data types) (i.e., the codes are instances of the

concepts).

7.   Appellants further assert on page 16:

> Appellants respectfully submit that what is disclosed in the paragraph
> bridging columns 15 and 16 of Liddy is constrained by the properties of
> the object it contains, i.e., the codes to which individual words are mapped
> clearly represent certain properties (e.g.,meanings) of those individual
> words. Therefore, the codes of Liddy are not abstract data of any type, let
> alone "abstract variables", as recited in claim 1. *There is no indication in*
> *Liddy that the codes are defined in terms of the information they can*
> *contain and in terms of the operations they can perform.* In other words,

> the disambiguated concept codes of Liddy are not "abstract variables" as recited in claim 1. (Italics added)

> Moreover, the "Response to Arguments" portion of the final rejection does not address what "abstract variables" are. Instead, the final rejection simply states that a word is disambiguated and then represented, i.e., replaced with disambiguated concept codes. Thus, the final Office Action does not present any evidence to demonstrate that "disambiguated concept codes" correspond to "abstract variables" as recited in the claims.

See §6, above (noting that variables do not perform operations); furthermore, it is clear from Fig. 5 that the codes generated **are** defined in terms of the information they contain as can be seen by the example shown, and by the description of the process as being disambiguation (col. 15, line 64 through col. 16, line 10, i.e., the disambiguation is based on the information being processed).

8.   Appellants assert beginning on page 17:

> The Advisory Action apparently has withdrawn the position taken in the final rejection that appeared to indicate that "disambiguated concept codes" correspond to the recited "abstract variables."

> The Advisory Action now appears to focus on "conceptual and term-based alternative representations" but fails to explicitly state what these representations have to do with the claimed invention, leaving Applicants wondering what portions of Liddy the rejection is actually based on, and what features of the claims that the "conceptual and term-based alternative representations" are supposed to anticipate.

> Moreover, the Advisory Action now asserts that "concept groups" and "concept categories" can be argued to be "abstract variables." Unfortunately, no reasoning or argument is presented to support this conclusion. Applicants are thus left to guess at the reasoning behind this unsupported conclusion.

See the previous two sections.

9.   Appellants assert on page 18:

> Applicants respectfully submit that the continued switching from one
> ground of rejection to another demonstrates the lack of substantive and
> procedural due process (required by the Administrative Procedures Act)
> accorded Applicants during the prosecution of this application. This is
> reason enough to reverse the rejection. See in this regard, In re Zurko,
> 119 S.Ct. 1816, 50 USPQ2d 1930 (1999), and In re Gartside, 53 USPQ2d
> 1769 (Fed. Cir. 2000).

The Examiner maintains that the grounds for rejection were not switched, but rather

additional supporting evidence was indicated within the Liddy reference to help clarify

the arguments.

(C. Liddy and Collins do not render claim 19 obvious)

10.   Appellants assert on page 19:

> Furthermore, Collins is cited to render obvious "performing machine
> learning for selecting particular operating functions out of said plurality of
> operating functions and for determining the processing order." Collins us
> alleged to teach the machine language technique of discriminative re-
> ranking for natural language parsing and to provide motivation in terms of
> an improved representation that results [in] improved recall and precision
> and decreased error. The alleged motivation to combine these references
> is for the purpose of "an improved representation that results [in] improved
> recall and precision and decreased error."

> The "Response to Arguments" portion of the final Office Action presents a
> different rationale than was presented in the previous Office Action to
> allegedly provide motivation to modify Liddy to achieve the invention
> recited in claim 19. The "Response to Arguments" section of the final
> Office Action switches from one statement of what Collins discloses to a
> different statement of what Collins discloses as a basis for the alleged
> motivation to combine these references in the manner suggested.

>The rejection itself states "Collins teaches the machine learning technique
>of discriminative re-ranking for natural language parsing where re-ranking
>techniques can be <u>applied to problems in natural language processing to
>improve the resulting representations (§1, "Introduction")."</u> - emphasis
>added. However the "Response to Arguments" section states something
>different, by stating that "Collins teaches the machine learning technique
>of discriminative re-ranking for natural language parsing <u>and gives a
>motivation in terms of an improved representation that results [in]
>improved recall and precision, and decreased error (§1, last paragraph)."</u> -
>emphasis added.

In the "Response to Arguments" portion of the final Office Action the motivation "to

improve the representation" was repeated with additional support and clarification as

indicted by Collins. In this case, the machine learning techniques taught by Collins

improved the parsing results (i.e. the representation), and as consequence of the

improved representation are improvements in precision and recall. Note the original

motivation in the 103 rejection has not changed.

11.   Appellants assert on page 20:

>Applicants respectfully submit that the Office Action fails to make out a
>prima facie case of obviousness for the reasons stated above concerning
>the shortcomings of Liddy, and because the Office Action fails to provide
>proper motivation to combine these references as alleged.

>A showing of a suggestion, teaching, or motivation to combine the prior art
>references is an "essential evidentiary component of an obviousness
>holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48
>USPQ2d 1225, 1232 (Fed. Cir. 1998). This evidence may flow from the
>prior art references themselves, the knowledge of one of ordinary skill in
>the art, or, in some cases, from the nature of the problem to be solved.
>See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568,
>1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). However, the suggestion

more often comes from the teachings of the pertinent references. See In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617.

The assertion that one of ordinary skill in the art would have been properly motivated to combine these two references (i.e., found it desirable) for the purpose of achieving "an improved recall and precision" is not a clear and particular evidentiary teaching, but is only a broad conclusory statement. All information search and retrieval systems are evaluated in terms of precision, which is the percentage of relevant documents retrieved to the total number of documents retrieved, and recall, which is the percentage of the relevant documents retrieved to the total number of relevant documents in the database searched. Thus, the asserted motivation is generic at least.

In response to appellants' argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, see §10.

12.   Appellant asserts on page 21:

Moreover, Collins is concerned with natural language parsing which attempts to determine the sequence structure of sentences, whereas *Liddy is concerned with categorizing individual words, and does not parse sentences.* The Office Action never explains how one is allegedly motivated to modify Liddy's word-by-word translation system with Collins'

sentence parsing system, or what in Liddy is re-ranked and how it is re-ranked, or what results from such an allegedly desirable re-ranking. Applicants respectfully submit that the details of how Liddy is allegedly modified by Collins are left up to speculation or further invention. The Advisory Action addresses these arguments by asserting that: Liddy teaches a method for multilingual document retrieval which includes a set of processing steps (sequence of functions) to generate a language-independent conceptual representation of the subject content of a document (text) (title, abstract, Fig. 2). Collins teaches the use of machine learning techniques to improve the representation of natural language processing (where natural language processing is a sequence of operations to generate a representation of text) (§1, "Introduction"). Thus the functions are similar.

Unfortunately, the Advisory Action fails to explain (1) in what way "the functions are similar;" or (2) why, based on that unexplained similarity, one of ordinary skill in the art would have the desire to modify Liddy "by specifically providing reranking techniques;" or (3) what reranking techniques have to do with "'performing machine learning for selecting particular operation functions out of said plurality of operating functions and for determining the processing order."

Additionally, the Advisory Action, on page 5, attempts to clarify the statement in the final Office Action that the motivation to modify Liddy by specifically providing re-ranking techniques, as taught by Collins, for the purpose of improving the resulting representation, by asserting that "it is well-known in the art that an improved representation can reduce memory requirements."

Applicants' response to this clarification is that the alleged well-known result is speculative at best, and is nothing more than a broad conclusory statements about the teaching of multiple references, standing alone, and, as such, is not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Finally, even if these two references were somehow properly combined, they would not render obvious the method of claim 1 because they are directed to different functions (e.g., word-by-word translation versus sentence parsing) and have different objects (e.g., document retrieval versus natural language parsing). In fact, the words "parse" and "parsing" are not found anywhere in Liddy.

Liddy processes (parses) both queries and documents leading to representations used

during information retrieval (see col. 2, "Summary of the Invention" and §3.2

"Processing Module Overview"; e.g., use of a part of speech tagger). Collins teaches a

machine learning technique for an improved parser (producing improved

representations)(§1. Introduction). In this case, the combination of Liddy in view of

Collins is motivated by improved representations that can be used during information

retrieval.

(D. Rebuttal of Arguments in Advisory Action)

13.   Appellant asserts on page 23:

> With respect to the issue of whether the ground of rejection in the final
> rejection was chanted from the non-final rejection, which is discussed on
> pages 2 and 3 of the Advisory Action, the Examiner's arguments are
> directed to petitionable matter. Applicants have not chosen to pursue this
> issue by petition the Cornnnissioner under 37 CFR § 1.181, so the issue is
> moot. Instead, Applicants have chosen to address the merits of the final
> rejection, as discussed above.

The Examiner will not address petitionable matter.

14.   Appellant asserts on page 23:

> The issue of whether Liddy fails to disclose replacing linguistic information
> with abstract variables is addressed above. However, on page 3 of the
> Advisory Action, the Examiner states the belief "that Liddy does disclose
> the replacement of linguistic information with other information." Applicants
> note that claim 1 does not simply recite replacing linguistic information
> with other information. Instead, claim 1 recites, among other features,
> "replacing the linguistic information with abstract variables in each of the
> second representations." This positively recited feature is not even
> addressed on page 3 of the Advisory Action.

See arguments above, in particular in §'s 4 - 8.

For the above reasons, it is believed that the rejections should be sustained.

Respectively submitted,

V. Paul Harper
February 13, 2004

Conferees
Richemond Dorvil
Vijay B. Chawan   2/19/04
V. Paul Harper

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER